| 1. General Project Information | |
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| **Project Name:** | Library Seat Availability Checking System (LSAC) |
| **Executive Sponsors:** | Northeastern University |
| **Impact of project:** | Providing an effective technology for locating available seats for Northeastern students and staff at the Snell Library |

**2. Project Team**

| Id | Team Members | Department | Telephone | E-mail |
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| **1.** | Agarwal, Vedant | College of Engineering | 617-412-8195 | agarwal.ve@northeastern.edu |
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| **3.** | Thakur, Shiv | College of Engineering | 857-205-3333 | thakur.shiv@northeastern.edu |
| **4.** | Venkataraman, Vijayakumar | College of Engineering | 206-941-6270 | venkataraman.v@northeastern.edu |
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**3. Project Scope Statement**

### Project Purpose

Students at Northeastern University often leverage the open spaces at the Snell Library to catch up on their homework, gain new knowledge, skills, and dispositions for learning and personal development they will use throughout their lives. The library improves student outcomes, brings information together, and connects readers and learners to their peers. The biggest issue facing students at the library is to find available seats to sit and study their material. This issue is prevalent at Northeastern University's Snell Library. It normally takes about 15 minutes for an individual to search for free study space into a library on a busy day or during exam periods. Using this technology, it will be easy to locate available spaces efficiently.

Our project's goal is to create a technology that informs students looking for seats at the open spaces in the Snell library if a seat is available or not using a Sensor. This technology is a library seat availability checking (LSAC) system which can be leveraged by all Northeastern University student using the NUGO application. We aim to create an additional feature to the existing NUGO App that allows students to view the layout of the Snell library and show them where a seat is available.

### Objectives

The main goal of this project is to provide an effective way to look for available spaces in the Snell Library using the Sensor and to provide this information to Northeastern students and staff via the NUGO App.

### Start and End Dates

The project starts on 07/11/2020 and ends on 02/26/2021.

| In Scope |
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| The LSAC system will be introduced to only the open spaces in Snell library to ensure students get the latest information by checking the NUGO App either on mobile or the browser. The hardware will be designed with a specification that does not affect students studying in the Snell Library. The hardware will be comprised of a propritary sensor which will not make any noise and it will only transmit the data to the LSAC system. This data will be viewable and accessable in the NUGO App by students, alumni as well as faculty and staff who have NUID credentials. All hardware and software design required for this project will be solely build in accordance with the layout of Snell Library and under the supervision of Northeastern University. |

| Out of Scope |
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| The closed spaces, rooms and conference halls in Snell Library that require prior reservation are not in scope of our project. Any other study spaces outside the Snell Library have not yet been taken into consideration but may be introduced in a similar way in the future. The system will be specifically designed on the structure and layout of Snell Library, including the hardware, software design and implementation. The data from the sensors cannot be viewed by anyone without NUID credentials. |

## 4. Project Milestone

| Id | Milestone Title | Milestone Descriptions | Date of Completion |
| --- | --- | --- | --- |
| 1 | Project Initiation Phase | Defined objective and goal of the project, as well as team formation and role assignment | 07/20/2020 |
| 2 | Project Planning Phase | Designed hardware implementation and installation as well as completion of project requirements and vendor evaluation | 09/09/2020 |
| 3 | Project Execution Phase | Designed and built system, developed software and carried out validation tests | 01/17/2021 |
| 4 | Project Closing Phase | Control and manage the project rollout, and prepare final report for project launch | 02/26/2021 |